

Amendments to the Claims

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims

1.-2. (Canceled)

3. (Currently amended) An isolated polynucleotide encoding a polypeptide selected from the group consisting of:

- a) a polypeptide comprising the [[an]] amino acid sequence of SEQ ID NO:2,
- b) a polypeptide comprising an amino acid sequence that is at least 90% identical to the [[an]] amino acid sequence of SEQ ID NO:2, wherein the said polypeptide has having thioredoxin activity,
- c) a biologically active fragment of a polypeptide that has the having an amino acid sequence of SEQ ID NO:2, wherein the said fragment has having thioredoxin activity, and
- d) an immunogenic fragment of a polypeptide that has the having an amino acid sequence of SEQ ID NO:2, which may be used for the production of an antibody that binds to the [[a]] polypeptide of SEQ ID NO:2.

4. (Currently amended) An isolated polynucleotide of claim 3 encoding a polypeptide comprising the [[an]] amino acid sequence of SEQ ID NO:2.

5. (Original) An isolated polynucleotide of claim 4 comprising SEQ ID NO:4.

6. (Original) A recombinant polynucleotide comprising a promoter sequence operably linked to a polynucleotide of claim 3.

7. (Original) A cell transformed with a recombinant polynucleotide of claim 6.

8. (Canceled)

9. (Currently amended) A method of producing a polypeptide of claim 3, the method comprising:

a) culturing a cell under conditions suitable for expression of the polypeptide, wherein said cell is transformed with a recombinant polynucleotide, and said recombinant polynucleotide comprises a promoter sequence operably linked to a polynucleotide encoding the polypeptide of claim 3, and

b) recovering the expressed polypeptide ~~so-expressed~~.

10. (Canceled)

11. (Currently amended) An isolated polynucleotide selected from the group consisting of:

- a) a polynucleotide comprising the [[a]] polynucleotide sequence of SEQ ID NO:4,
- b) a polynucleotide, which encodes a polypeptide with thioredoxin activity, comprising a polynucleotide sequence that is at least 90% identical to the [[a]] polynucleotide sequence depicted in [[ef]] SEQ ID NO:4, ~~and which encodes a polypeptide having thioredoxin activity~~,
- c) a polynucleotide that is completely complementary to a polynucleotide of a),
- d) a polynucleotide that is completely complementary to a polynucleotide of b), and
- e) an RNA equivalent of a)-d).

12. (Currently amended) An isolated polynucleotide probe, for detecting the complete complement of the polynucleotide of claim 11, comprising at least 60 contiguous nucleotides of a polynucleotide of claim 11, ~~and which may be used to detect the complete complement of a polynucleotide of claim 11~~.

13. (Withdrawn) A method of detecting a target polynucleotide in a sample, said target polynucleotide having a sequence of a polynucleotide of claim 11, the method comprising:

- a) hybridizing the sample with a probe comprising at least 20 contiguous nucleotides comprising a sequence complementary to said target polynucleotide in the sample, and which probe specifically hybridizes to said target polynucleotide, under conditions whereby a hybridization complex is formed between said probe and said target polynucleotide or fragments thereof, and
- b) detecting the presence or absence of said hybridization complex, and, optionally, if present, the amount thereof.

14. (Withdrawn) A method of claim 13, wherein the probe comprises at least 60 contiguous nucleotides.

15. (Withdrawn) A method of detecting a target polynucleotide in a sample, said target polynucleotide having a sequence of a polynucleotide of claim 11, the method comprising:

- a) amplifying said target polynucleotide or fragment thereof using polymerase chain reaction amplification, and
- b) detecting the presence or absence of said amplified target polynucleotide or fragment thereof, and, optionally, if present, the amount thereof.

16. (Withdrawn) A composition comprising a polypeptide of claim 1 and a pharmaceutically acceptable excipient.

17. (Withdrawn) A composition of claim 16, wherein the polypeptide has an amino acid sequence of SEQ ID NO:2.

18.-26. (Canceled)

27. (Withdrawn) A method of screening a compound for effectiveness in altering expression of a target polynucleotide, wherein said target polynucleotide comprises a sequence of claim 5, the method comprising:

- a) exposing a sample comprising the target polynucleotide to a compound, under conditions suitable for the expression of the target polynucleotide,
- b) detecting altered expression of the target polynucleotide, and
- c) comparing the expression of the target polynucleotide in the presence of varying amounts of the compound and in the absence of the compound.

28. (Withdrawn) A method of assessing toxicity of a test compound, the method comprising:

- a) treating a biological sample containing nucleic acids with the test compound,
- b) hybridizing the nucleic acids of the treated biological sample with a probe comprising at least 20 contiguous nucleotides of a polynucleotide of claim 11 under conditions whereby a specific hybridization complex is formed between said probe and a target polynucleotide in the biological

sample, said target polynucleotide comprising a polynucleotide sequence of a polynucleotide of claim 11 or fragment thereof,

- c) quantifying the amount of hybridization complex, and
- d) comparing the amount of hybridization complex in the treated biological sample with the amount of hybridization complex in an untreated biological sample, wherein a difference in the amount of hybridization complex in the treated biological sample is indicative of toxicity of the test compound.

29.-45. (Canceled)

46. (Previously presented) An isolated polynucleotide of claim 11, comprising the polynucleotide sequence of SEQ ID NO:4.